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Data are presented from two studies of the amount and kind of reading done by adolescent boys. Study 1 examined the family context of boys' reading and the relationships among boys' print use. It sought to answer such questions as "What parental behaviors are effective in socializing children's print use?" and "Are there relationships between parents' and childrens' use of the print media?" Subjects were 137 Seattle families of tenth-grade boys. Study 2 also examined relationships among boys' different print behaviors and explored correlations between print use and reading skills. Its subjects were 381 ninth- and eleventh-grade boys in three Seattle suburban school districts. Methodological details for each study are presented in sections where the relevant data are analyzed. References and tables are included. (Author/RT)

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A STUDY OF CHILDREN"S READING BEHAVIOR

Peter Clarke
Communication Research Center
University of Washington

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Mr. Leo Jeffres served as research assistant throughout the field work and much of the analysis for Study 1. His contributions were substantial.

PREFACE TO THE REPORT

This report presents findings from more than a year's research on reading behavior by adolescent boys. The questions examined have received little or no prior research attention:

(1) Are there relationships between parents' and children's use of the print media?

(2) What parental behaviors are effective in socializing children's print use--in increasing their use, and in fostering parent-child similarities in print use?

(3) What are the relationships, if any, among various aspects of children's reading--use of books, various kinds of magazines and content interests in the media?

(4) Which aspects of children's reading are related to reading skills?

Two separate studies are discussed. Study 1, actually the one conducted most recently, examines the family context of boys' reading--the socialization questions noted above--and relationships among boys' print use. Results are presented in four sections. Data were obtained in personal interviews at home with a probability sample of 137 families of tenth-grade boys in Seattle.

Study 2, our first project, also examines relationships among different print behaviors by boys and explores correlations between print use and reading skills. The sample is a probability selection of 381 ninth and eleventh-grade boys enrolled in three suburban school districts outside Seattle. Results are presented in two sections. Questionnaires were administered at school.

Methodological details for each study are presented in sections where the relevant data are analyzed. Tables are numbered separately for each study. Each section within the two studies contains its own footnote references.

Summary statistics are reported wherever the significance level (two-tailed) is .10 or better. The symbol "NS" (for not significant appears in tables wherever the appropriate data failed to reach the .10 level. This simplification is intended to facilitate the reading of tables. Our justification for this convenience is the clearly bi-modal distribution of the dozens of correlations derived in this analysis. Relatively few borderline coefficients were found with p-values around .15. Relationships are either at or near zero, or in the range of acceptable significance levels.

INTRODUCTION TO STUDY 1

In recent years we have learned a great deal about what children read, see or hear in the mass media, but far less about how youngsters come to be the kind of media users they are. The first type of study, beyond sheer description, often relates children's media use to their other attributes and behavior. The second type of study, were it conducted more often, would inquire into relationships between children's media use and the behavior of other persons in their environment--principally parents and teachers who seek to socialize the young.[1]

Most of the limited amount of media-socialization research we have concerns television. The first study reported here is an effort to discover factors affecting the amount and kind of children's reading in books and magazines.[2]

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[1] For examples see Eleanor Maccoby, "Why Do Children Watch Television?" Public Opinion Quarterly, 18:239-244 (1954); James S. Coleman, The Adolescent Society (New York: Free Press, 1961); Peter Clarke, "Parental Socialization Values and Children's Newspaper Reading," Journalism Quarterly, 42:539-546 (1965).

[2] The research design also considered newspaper reading by boys and their parents--time spent reading the daily and Sunday papers, recency and frequency of newspaper reading and attitudes toward newspaper reading as a leisure activity.

Parents' and children's behavior and attitudes about newspapers were found to be completely uncorrelated. Sons' use of newspapers is not associated with any of the family variables analyzed in subsequent sections of this report. For simplicity, newspaper data have been dropped from the remainder of the report covering Study 1. Study 2 contains substantial data concerning relationships between boys' newspaper reading and other print media behavior.

At this exploratory stage, we have confined ourselves to tenth-grade boys. The sex limitation was dictated by research costs; the selection of tenth graders was guided by two considerations:

(1) A variety of developmental studies of children's media use suggest this age bracket contains many youngsters who are adopting adult patterns of reading, listening and viewing.[3]

(2) Tenth graders are not yet driving cars. Few of them have their leisure time absorbed exclusively by peer culture activities.

This age level seems an appropriate compromise between two competing processes--the development of adult role interests, and the attractions of adolescent pastimes.

Several clusters of findings resulted from Study 1. The first section examines boys' magazine and book reading as leisure pursuits, and seeks to discover whether the amount and kind of boys' reading is related to two classes of family variables: (1) the amount and kind of reading by parents, and (2) the extent of parent-child social contact involving reading materials. Some additional correlates of boys' reading are also presented.

The second section elaborates this analysis by adding an important variable to the study of fathers' behavior and sons' print use. This is the extent to which son values his father as a behavior model.

The third section examines fathers' and sons' content interests in the print media--the kind of messages they are likely to single out for attention. The impact of identification and father-son discussions on these interests is also studied.

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[3] For example, see Wilbur Schramm, Jack Lyle and Edwin B. Parker, "Patterns in Children's Reading of Newspapers," Journalism Quarterly, 37:35-40 (1960); and by the same authors, Television in the Lives of Our Children (Stanford: Stanford University Press, 1961).

The fourth section reports some findings concerning parental independence training and sons' print use.

The first section contains a discussion of basic methods and measures. Each succeeding section explains procedures relevant to the variables reported in that section.

Section One: The Context of Boys' Print Use

There are ample reasons to expect, and to be interested in, parent-child similarities in print use. Data describing the kind and amount of parents' reading indicate the availability of magazines and books in the home. Presumably, the availability that adolescent boys enjoy now is highly correlated with availability during earlier, more formative years. Although teenagers are losing some of their reference-group ties with the family in favor of their peer culture, we should expect reading choices by parents to correlate positively with boys' behavior.

Reading by parents also indicates displacements in their leisure time. Generally speaking, the more one reads, the more time displaced, and the more visible that behavior should be to children. Visibility is a necessary condition for imitation.

The size of correlation between parents' and sons' reading provides a rough appraisal of the extent to which other socializers, like school, can overcome factors of family availability and print visibility in affecting children's reading.[4]

A start at studying print use by parents and boys is to inquire into the amount of book reading and buying they do, and the degree of their exposure to specific magazines. The present study has not gone further to distinguish content interests in books, but magazine use has been categorized into several topical areas.

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[4] Strictly speaking, this assumes that socializers outside the home, like teachers, operate independently from parents. This is an empirical question of great interest. The extent of independence between socialization behavior by parents and teachers depends on what information each has about the other, and how each acts on the basis of this information.

Social contact about print between parents and children can have two consequences, among others. First, contact orients children toward books and magazines as discriminable objects in the environment. When a father recommends a book to his son, it is hard for the boy to overlook the fact that the particular book exists, and perhaps less difficult to ignore the existence of books in general.

Second, contact about books and magazines can identify them as targets of parental approval. This consequence is most likely in the case of book or magazine giving where these items assume value as evidence of affection. Parent-child discussions about books or magazine articles can also serve this purpose.

This study examines relationships between eight situations of parent-child contact involving print and the amount of print use by boys. For books, we inquire whether parents use them as gifts to the child, whether parents take their sons to the library, whether parents recommend books to their son, and whether they ask son's opinion about books he has read. For magazines, we ask whether parents give magazine subscriptions, whether they subscribe to magazines because they might interest their son, whether they show magazine articles to their son, and whether they ask his opinion about articles he has read.

Considering the limitations on retrospective accounts of behavior like this, it is difficult to learn whether these social contacts are amiable or tense, authoritarian or cooperative, appreciated or resented by the child. We have taken some pains to assure ourselves that the contacts did occur, however. And we have inquired about these contacts separately from mothers and fathers, so we can examine their individual relationships with sons' reading behavior.

METHODS

Sample and interviewing.

The sample is 137 families selected by stratified, random methods from the roster of tenth-grade boys enrolled in Seattle's 12 public high schools. Since the study concentrates on family socialization of media use, an initial telephone screening interview was conducted to eliminate families where the designated child had not lived continuously with his present parents since infancy.

The screening interview was also used to obtain interview appointments. Data were gathered by teams of two interviewers. Upon entering the household, one interviewer instructed the son in responding to a self-administered questionnaire, and asked him to complete it in his bedroom or some other isolated part of the house. Interviewers then conducted simultaneous interviews with each parent in separate rooms of the house.

Measures of book and magazine use.

Amount of book reading was measured by asking whether the respondent had read any books in the last 60 days ("that were not assigned at school or part of your school work," in the case of sons), followed by a question asking for titles or authors. The index used is the number of titles mentioned that are listed in directories of books in print.

Book buying was assessed by asking how many paperback or hard cover books the respondent had purchased in the last six months.

Magazine reading was measured by a series of items that began by asking whether there were any magazines the respondent read. If so, he was asked to write their titles on separate lines and then to rate each title for how much of the average issue he usually read--almost all of it, most, some or less than that.

Magazine mentions were coded into *a priori* categories of presumed content similarity. Categories used in the analysis below are:

General interest adult. Magazines with heterogeneous content aimed at an adult market, such as *Life*, *Saturday Evening Post*, *Look*, *Readers Digest* and *Pageant*.

News. *Time*, *Newsweek*, *U.S. News and World Report*, *Atlas*, *Reporter* and other publications devoted to public affairs.

Sports-outdoor. Magazines with a heavy emphasis on participant or spectator sports, such as *Outdoor Life*, *Sports Afield*, *Guns*, *True*, *Golf*, *American Rifleman* and *Yachting*.

Mechanical. Publications that specialize in technological, scientific and electronic features, such as *Popular Mechanics*, *Popular Science*, *Electronics Illustrated* and *Aviation Week*.

Car and hot rod. *Road and Track*, *Motor Trend*, *Hot Rod*, *Cycle World*, *Custom Car* and the like.

The index for each category is the number of magazines mentioned, weighted by the rating each received. Several other categories of magazines received too few mentions by sons to warrant analysis; they are sex (*Playboy*), teen (*Sixteen*, *Hit Parader*), women's and shelter (*House and Garden*, *McCalls*) and fashion (*Vogue*).

Measures of parent-child contact about books.

Each parent was asked whether he had given the designated child books during the past two years--"perhaps for Christmas, his birthday or some other reason?" Those who claimed giving were asked to name the books, or to describe their content as a validation.

A battery of questions dealt with taking son to the library. First, parents were asked whether they had a library card, and if so, to produce it or tell when it would expire. Once past this hurdle, they were asked how many times they had gone to the library in the past six months. If they had gone, they were asked, "Did * * * go with you any of those times?"

The questions on recommending books to son and asking for his opinion about books he had read followed similar formats and have similar validations. Parents were first asked whether they "ever" did the specified activity. If so, they were asked to report the last time this had happened. This response was coded as today or yesterday, other time within the last week or longer ago.

Parents were asked to describe the book they recommended or the book son had been reading. Very few parents who had reported recent discussions failed to describe the experience satisfactorily, but any who could not were grouped with parents who claimed none of the specified activity.[5]

Measures of parent-child contact about magazines.

Two questionnaire items concerned making magazines available to son. One asked whether the parent had ever given the designated child a magazine subscription. The other asked whether the parent had ever subscribed to a magazine because he thought it would interest son. Neither question was followed by an open-end validation, as previously, although the items were asked in the interview after a considerable battery of questions that had required validating information from respondents.[6]

Discussions about magazines were assessed by asking parents whether they ever showed items they had seen in a newspaper or magazine to the designated child, and whether they had ever asked son for his opinion about something he had read in a newspaper or magazine. Coding and validation paralleled the questions for books.

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[5] As a validation that these recency-recall questions actually measure frequency of discussions, parents were later asked to judge how often they recommended books or asked for son's opinion. Responses to these frequency items correlate in the .80s with the validated recency index.

[6] Our inability to account for precisely which magazines were given or subscribed to places unfortunate restrictions on our analysis, which become apparent below.

Statistics.

Findings result from correlational data that are reported in the form of Gamma coefficients with their associated z-values for reference to the normal curve. Gamma makes no assumptions about the distribution of ordinal variables. The coefficient expresses the proportion by which one can reduce the error of estimating the order of pairs of respondents on the dependent variable by knowing their values with respect to an independent variable.[7]

Because of the exploratory nature of this study, Gammas that meet the .10-level (two-tailed) or better are shown.

RESULTS

Characteristics of the adolescent reader.

Book reading is perhaps the most status-enhancing form of print behavior in our society, as advertising for encyclopedias and book clubs attests. One suspects that a taste for books is cultivated by a high level of educational training, or by social demands experienced among educated persons--given the repeated disclosure of high correlations between years of schooling and book reading. The parents in this sample are no exception (father $G= .39$, $z = 2.41$; mother $G = .51$, $z = 3.21$).

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[7] The original presentation of this statistic can be found in Leo A. Goodman and William H. Kruskal, "Measures of Association for Cross Classifications," Journal of the American Statistical Association, 49:732-764 (1954). For a discussion of Gamma's properties and relationships to other measures of association, see Herbert L. Costner, "Criteria for Measures of Association," American Sociological Review, 30:341-353 (1965).

Whatever is associated with parents' education that lead to their greater book reading has not been transmitted to their adolescent sons, however. There is not the slightest relationship between either parent's schooling and the extent to which their boys read or purchase books.

Nor is boys' book reading highly correlated with some of the cognitive skills many teachers consider useful for decoding and enjoying books. A variety of aptitude test scores were available from the school files of children in this study. Skill at reading comprehension, as judged by the Metropolitan Achievement Test, correlates at only the .10 level with amount of book reading. Competence in social studies work at school is more highly related (at the .05 level for social studies vocabulary, and at the .01 level for social studies information).

Book reading among boys is strangely isolated from other aspects of their use of print media. Amount of book reading is not correlated with extent of reading in any of the magazine categories--general interest adult, news, sports-outdoor, mechanical or car and hot rod.

These findings tend to disconfirm some of the more popular expectations about adolescent book readers--at least among 15-year-old boys. Book fans do not come primarily from homes with high educational background. Book reading is not confined to children with superior reading skills. Book reading is not one ingredient of a syndrome of heavy print use.

Boys' magazine reading is also uncorrelated with parents' education except for news publications, where the relationship with fathers' schooling reaches the .05 level, and with mothers' education the .10 level.

Boys' reading of news magazines is also associated with reading skills ($p<.05$), with social studies vocabulary ($p<.10$) and with social studies information ($p<.05$). These skills do not correlate with reading in any other magazine category. (See Study 2, section two for additional analysis.)

There are no significant correlations in amount of reading among any of the five magazine categories.

These data are similar to those for books. A major stratification variable in American society, education, fails to predict sons' use of magazines, except for news publications. Cognitive skills are related to reading only in this category. There is no evidence of a general orientation to the print media.[8]

Parent-child contact and children's book reading.

Although there is a substantial relationship between mothers' and fathers' book reading ($G = .46$, $z = 2.55$), the extent of sons' book reading correlates with neither parent. There is a suggestion of greater reading among sons whose mothers are very high book readers (five or more works in the last 60 days), but this upturn is not enough to produce a significant relationship overall. The amount of book purchases reported by sons does not correlate with buying by parents, either.

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[8] An important caveat must be entered. The sample of families studied here excluded broken homes. From school records we know that tenth-grade boys who have not lived continuously with their present parents since infancy have significantly lower scores in reading and language skills, and familiarity with social studies concepts.

A study that included these youngsters might find higher correlations between boys' use of the print media, their parents' education and their own skills. It should also be emphasized that the sample of families is urban.

In the absence of parent-child similarities in book use, it should not be surprising if many of the social contacts involving books fail to predict sons' exposure to this medium. Table 1.1 shows relationships between each of the contact variables, for each parent, and parents' and sons' book use. Findings can be summarized by examining pairs of rows in Table 1.1 that are numbered indentically.

The two rows numbered 1 show relationships involving book giving. While about one-fifth of fathers and almost one-third of mothers reported--and substantiated--book giving during the past two years, presenting books to son does not correlate with parents' own reading. This suggests that giving books to adolescent sons is not often an effort to encourage imitative behavior by the child. Book giving does not correlate with reading or buying by sons.

Book giving quite naturally correlates with the number of book purchases made by parents in the last six months. But neither aspect of sons' book use, reading or buying, correlates with whether son has been the recipient of a book gift.

Rows 2, parent taking son to the library, show mixed findings. This activity is relatively rare; about one-sixth of the parents reported doing this during the last six months. Fathers who take their sons are heavy book readers, but not mothers. (Do they just drive the car?) Sons' book reading and buying are not correlated with these experiences.

Rows 3, recommending books, show marked correlations with parents' book use. Recommendation by mothers correlates with reading by sons, but not recommendation by fathers.

Table 1.1*

RELATIONSHIPS BETWEEN PARENT-CHILD CONTACT INVOLVING BOOKS, PARENTS' BOOK BEHAVIOR AND SON'S BOOK BEHAVIOR

		Parents' Book Behavior				Son's Book Behavior	
	Parent-Son Contact:	Father book read	Father book buy	Mother book read	Mother book buy	Son book read	Son book buy
1.	Father give book to son	NS	.49 (2.28)			NS	NS
2.	Father take son library	.56 (2.21)	NS			NS	NS
3.	Father recommend books	.51 (2.94)	.50 (2.78)			NS	NS
4.	Father ask book opinion	NS	NS			NS	NS
1.	Mother give book to son			NS	.43 (2.06)	NS	NS
2.	Mother take son library			NS	NS	NS	NS
3.	Mother recommend books			.56 (3.25)	.54 (3.26)	.37 (2.03)	NS
4.	Mother ask book opinion			NS	NS	.29 (1.66)	NS

N=137

*NS in this and subsequent tables indicates a non-significant relationship, one that failed to meet the .10 level (two-tailed).

Asking son's opinion about books he has read, rows 4, is not related to parents' own book use; for mothers, this interaction with son correlates modestly with his level of book reading.

Thus, none of the forms of parent-child contact involving books studied here is a predictor of sons' book buying. Book reading by sons correlates only with social interaction with mother about books.

Aspects of this mother-son talk about books bear a further look. Mothers are not more likely to make book recommendations than fathers, although they are more likely to ask their son's opinion about books he has read ($p < .01$). Among mothers (and fathers, too), opinion asking is much less common than book recommendations. Surprisingly, the recencies of these two types of social interaction by mothers are only modestly correlated ($G = .34$, $z = 1.84$).

One might reason that the correlation between sons' reading and social interaction with mothers would be higher in families where mothers read books, than in families where this modeling behavior is absent. Such is not the case, however. Even where mothers report no book reading during the past two months, the recency of their interaction about books is positively related to sons' book reading.

Parent-child contact and children's magazine reading.

Magazine reading by family members was examined within each of the content categories used in coding this behavior. Substantial numbers of mothers, fathers and sons identified themselves as readers in only four of the categories--general interest adult, news, sports-outdoors and mechanical. Table 1.2 shows the parent-child correlations in reading.

Table 1.2

PARENT-CHILD CORRELATIONS IN MAGAZINE READING

	mother	father
General interest adult	.37 (2.38)	.35 (2.28)
News	.51 (2.75)	.57 (3.27)
Sports-outdoor	NS	NS
Mechanical	NS	.79 (3.97)

N = 137

Parent-child similarities are clearly dependent on parent and type of publication. Sons' reading correlates about equally with mothers' and fathers' for general interest magazines and news magazines. The latter finding is somewhat surprising given the heavy dose of male-interest public affairs content presented by Time, Newsweek and the like. The absence of a father-son correlation in sports reading also is startling. The marked correlation for reading mechanical publications is underscored by data describing parent-child contact concerning magazines.

Fathers who reported they had given their son a magazine subscription were themselves very likely to be readers of mechanical publications ($G = .66$, $z = 2.63$). Paralleling this, sons who had received a magazine subscription tended to be readers of Mechanics Illustrated, Popular Science and the like ($G = .70$, $z = 3.07$). Most of these publications have a heavy orientation toward hobbies and basement shop projects; it is not surprising, therefore, to see them consumed by family units (there is a high mother-father correlation in reading) and apparently used with effect as gifts.

Fathers who made gifts of magazines show no other distinctive aspect of magazine reading, nor do their sons. Magazine giving by mothers correlates with none of their or their sons' reading choices.

A different picture emerges when examining parents' responses to the question: "Have you ever subscribed to a magazine because you thought it would interest * * *?" Fathers who claimed this attention to their son's reading are somewhat more likely than others to be users of sports and outdoor publications ($G = .36$, $z = 1.70$). Apparently their efforts proved fruitless; there is no correlation between fathers' subscription behavior and sons' reading in sports magazines.

Mothers who said they subscribed to magazines out of an interest in their sons are slightly more likely to read general interest publications, like Life and Readers Digest, than mothers who disclaimed such purchases ($G = .34$, $z = 1.71$). And these subscriptions are related to sons' reading. Sons with mothers who subscribed to magazines for them are heavier-than-average readers of general interest magazines ($G = .39$, $z = 1.95$).[9]

Thus, although the parent-child correlations for general interest magazine reading are about the same, there appears to be a qualitative difference in the circumstances surrounding mothers' and fathers' contributions. It would seem that mothers are the main socializers of exposure to these familiar and well-read media.

As with the analysis of book reading, indexes representing the recency of each parent's recommending a newspaper or magazine item to son, and asking his opinion about something read in a newspaper or magazine, were correlated with sons' gross reading in each type of magazine. There are no significant relationships.[10]

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[9] Mothers' role in encouraging this reading is even more sharply revealed when the analysis is confined to families in which mother reports some reading in general interest adult magazines. For these cases, the correlation between mother subscribing to a magazine and sons' reading in general interest publications is .51 ($z = 2.33$).

[10] Fathers who recommend items are likely to be readers of mechanical magazines ($G = .54$, $z = 2.32$); mothers who recommend are likely to be readers of general interest publications ($G = .34$, $z = 2.15$). Sons' consumption of these media is related to parents' subscribing behavior, as noted, but not to their social interaction.

Other data concerning our measures of parent-child discussion about newspapers and magazines suggest that these experiences are less important for sons' magazine reading than the sheer availability of these media in the home, or knowing that parents read magazines. Two magazine categories show high parent-child correlations in reading, general interest adult and news. When analysis is confined to parent-child pairs where the parent reads in a category, measures of social interaction (recommending items and opinion asking) still fail to correlate significantly with sons' reading in that category.

DISCUSSION

Findings reported here suggest that the family context of reading by adolescent boys differs between print media, books and magazines. Furthermore, mothers and fathers are not equally involved in the extent to which their sons read.

The most apparent difference between media is the lack of parent-child correlation in amount of book reading (and buying), contrasted against the several high correlations for magazine reading. Some dissimilarities in book use may result from our lack of specificity in book content interests; perhaps one would find parent-child correlations in reading historical novels, or biographies or books about politics.

Some of the difference in correlations may result from different visibilities in parents' use of books and magazines. Many book-reading parents may save this activity for late evening, when the children are asleep, or may read in bed or at times when youngsters are not at home. Magazines, on the other hand, may be read in the early evening, or at other times when children are about. Perhaps there also are accessibility differences between the two media; many parents may shelve books in the bedroom, whereas magazines are left lying about the living room.

Whatever the explanation, there is no evidence here of a "book reading culture" in which parental example inculcates a love of books by the child.[11]

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[11] Even indirect measures of book reading support this statement. The first item in parents' questionnaire asked respondents to report things they enjoyed doing most in their spare time. Many parents mentioned some reading activity, usually books. Their sons are not heavier book readers than are sons with parents who did not mention reading as a leisure interest.

Furthermore, many of the most obvious means by which parents might hope to encourage book reading fail to correlate with sons' book use, although they are associated with parents' own book reading. The exception, among variables studied here, is discussion about books between mother and son.

Why mothers should apparently be effective in this regard is unclear. Fifteen-year-old boys are generally seeking to learn male adult role behavior--to play sports, date girls, drive cars and be dominant personalities. The correlations involving contact with mother suggest that book-use is not an especially masculine pursuit. Although fathers may attempt to play a socialization role, there is no evidence here that they are successful--at least with adolescent sons.

The absence of parent-child correlations suggests that school experiences may be the major influences on boys' book reading. The presence of books and other library resources, contact with stimulating teachers and the availability of class time for reading are factors that might be examined. The lack of correlations between boys' reading, their parents' education and their own reading abilities should discourage stereotypes some teachers entertain about the social and intellectual limitations on children's exposure to books and magazines.

A second difference in the data between books and magazines concerns the type of parent-child contact that is related to sons' reading. For magazines, discussions between parents and their boys do not correlate with sons' reading. Perhaps this is due to the rather general nature of our question; it asked about "newspapers or magazines" in a single item.

Unlike books, magazine gifts and purposive subscriptions by parents correlate with sons' reading, but the spheres are limited in which this parental behavior is effective. Father's influence is apparent only in the specialized area of mechanical and technological information. Mother's influence is apparent in much broader and more popular reading experiences offered by general interest publications.

The primary consistency in these findings concerning family reading behavior is the prominence of mothers as potential agents of socialization. Their role in books and general interest magazines has already been noted. The irrelevance of much of fathers' magazine use is underscored by the findings dealing with sports-outdoor publications.

One would expect sports to be a major province of father socialization activity. Nostalgic pictures of dad and boy hovering over the campfire after a day's fishing, or enthusiastically munching hot dogs at the ball park are rich ingredients of American calendar art. Perhaps television has changed all that.

In any event, although about four out of ten fathers and sons reported reading sports-outdoor magazines, there is no correlation in their use, nor any evidence of effectiveness in fathers' efforts to stimulate such information seeking.

The potency of mothers as print socializers is underscored in another way. Initiating social contacts with a son involving print might be expected to spring from an interest in the child's development. In some cases, this interest might center around the desire to promote reading; in other cases the parent might want to facilitate certain patterns of information seeking--about sports, or hobbies or public affairs.

The more that social contacts are part of parents' general orientation toward their children, the higher should be the intercorrelations among the various behaviors studied here. In general, these intercorrelations are much greater among mothers than among fathers. For example, among mothers the relationship between magazine giving and subscribing out of an interest in son equals .62 ($z = 3.09$). Among fathers, the relationship is not statistically significant. Again, book giving and magazine giving correlate for mothers ($G = .56$, $z = 2.40$), but not for fathers.

For fathers, social contact about print is multi-dimensional, and thus, less predictable.

There is an additional difference between parents that accentuates these discrepancies in the singleness of their orientation toward sons' print use. For fathers, many social contacts (book giving, taking son to the library and magazine giving) are correlated with their own level of education, while this is never the case for mothers. Only sons of well educated fathers have these opportunities of social contact with them about the print media. Mothers at all levels of education engage in this behavior with their sons.

Section Two: Identification and Print Use

Thus far we have examined parental socialization of reading without taking account of how valued a parent may be as a model to the child. The extent and type of parents' own reading indexes the availability of print resources in the home, and perhaps the visibility of this leisure activity to the child. But visibility is not a sufficient condition for emulation. The more a parent is valued as a behavior model in general, the more similarity we should expect between parent's and child's media use. The more a parent is valued, the more effect parent-child contact involving print should exert on a youngster's use of books and magazines.

The concept we have chosen to represent valuation of parent as a model is the child's identification with parent. The concept identification has a rich tradition in behavioral research, which has left it with a variety of surplus meanings. Our definition follows the lead of Slater who has distinguished between person and positional identification.[1] Furthermore, we have chosen to explicate identification as a process, rather than a product.[2]

Identification is the aspiration to be like somebody. Left unspecified is the motivation underlying this aspiration; one may seek to emulate another out of a desire to attain similar resources, like wealth or power, similar friendships or any other value, including regard by the identificand himself. The concept as used here is confined to the personal attributes of another person--personal identification--excluding role and status occupancy of another--positional identification.

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[1] Philip E. Slater, "Toward a Dualistic Theory of Identification," Merrill-Palmer Quarterly, 7:113-126 (1961).

[2] Urie Bronfenbrenner, "The Study of Identification Through Interpersonal Perception," in R. Tagiuri and L. Petrullo (eds.) Person Perception and Interpersonal Behavior (Stanford: Stanford University Press, 1958). See also, Alfred B. Heilbrun, Jr., "The Measurement of Identification," Child Development, 36:111-127 (1965).

Three terms of our definition require further specification--aspiration, like and somebody. Aspiration is not the perception that one is like another, but rather that one's ego-ideal corresponds to the impression one has of another's traits. This distinction is necessary to avoid confounding identification with level of self-esteem.

The term "like" implies some scheme for selecting a pool of personal traits as dimensions of identification with another. A large number of factor-analytic studies of person-perception demonstrate the clustering of discreet attributes into a smaller number of dimensions. The most frequently reported include achievement characteristics (industriousness, determination, efficiency), affiliation skills (friendliness, consideration for others), tendencies toward autonomous behavior (curiosity, a questioning attitude) and submissiveness to others (eagerness to please, a tendency to conform).

Our pre-test research on identification disclosed that the first three aspects of person-perception are statistically independent; the fourth is negatively correlated with the third. In the absence of an opportunity to sample each tenth-grader's attributes for judging others, and to use these to measure identification-with-father, we chose to build attribute variability into our concept by including major representatives of the four factors listed above. We added some attributes outside these factors to increase the range of property space embraced by our concept identification.

Because of time limitations during the interviews, and the expectation that tenth-grade boys would find their fathers the most relevant sources of reading socialization, we decided to measure only son-father identification. Findings reported earlier disclose the mistakes of this decision.

METHOD OF MEASURING IDENTIFICATION

Thirty-two attributes were translated into "zero-point" rating scales for self-administered response. Each scale had five spaces, ranging from "not at all X" on the left to "very X," on the right. Examples are "not at all friendly" to "very friendly," "not at all hard working" to "very hard working," etc.

The first interview questionnaire boys completed (in privacy) asked them to rate two concepts using the scales--their "father, as he appears to you," and "yourself, as you would ideally like to be." Interviewers instructed boys in using the questionnaires and assured them that their answers would not be seen by parents.

The index for identification is the average squared difference between father and ideal-self, across the 32 attributes. The range of this index extends from .00 to 5.75. One-third of the boys have average squared difference scores of less than .90, and about one-third have scores greater than 1.50.

In the analysis below, identification is treated as a contingent condition. Due to the small sample size, identification has been dichotomized at the median into one group of father-son pairs characterized by low identification (N = 68) and a second group with comparatively high identification (N = 66).[3]

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[3] Three boys were excluded from analysis due to missing data.

Within each group we examine two types of relationships: (1) father-son similarities in use of books and magazines, and (2) correlations between father-son social contact about print and son's print behavior. Again, the statistics are Gamma with associated z-values.

RESULTS

Identification and print use.

Table 1.3 shows the extent of father-son similarities in print use, according to different levels of identification. Some marked differences are apparent.

Table 1.3

FATHER-SON SIMILARITIES IN PRINT USE, BY SON'S IDENTIFICATION WITH FATHER*

	Son's Identification with Father	
Print behavior:	low	high
Book reading	NS	.57 (1.97)
Book buying	NS	NS
Reading general interest adult magazines	.53 (1.81)	.43 (1.65)
Reading news magazines	NS	.89 (6.23)
Reading sports-outdoor magazines	NS	NS
Reading mechanical magazines	NS	.91 (5.51)

*Because of small sample sizes in the two groups (68 in low identification and 66 in the high), variables were collapsed into dichotomies--readers vs. non-readers.

The lack of father-son correlation in book reading noted earlier across the entire sample of 137 families contrasts against the significant relationship for families with a high degree of sons' identification with father. Orientation towards books is apparently seen by these adolescent boys as one way to emulate their fathers. There is still no correlation for book buying.

Reading similarities in general interest adult magazines are unaffected by extent of identification. Correlations are significant for both groups. Reading similarity in news magazines is significant for only the high-identification group. This also is the case for mechanical magazines.

A notable exception to this pattern of similarity in print use associated with identification occurs for reading in sports-outdoor magazines. There is no correlation between fathers and sons--even for high-identification pairs.

Table 1.4 reports correlations between each aspect of fathers' social contact about books and the number of books their sons have read during the last 60 days. Book giving remains uncorrelated with sons' reading--even for high identification families.

The effect of taking son to the library is a substantial reversal of what one would expect. It is the low identification families where this paternal behavior correlates with sons' book reading. Although the size of correlation is large, its associated z-value is marginal due to the restricted variance in taking son to the library. Few fathers reported this activity.

There is no relationship in either group between recommending books and sons' reading, or between opinion asking and sons' reading.

Table 1.4

RELATIONSHIPS BETWEEN FATHER'S SOCIAL CONTACT ABOUT BOOKS AND SON'S BOOK READING, BY SON'S IDENTIFICATION WITH FATHER

	Son's Identification with Father	
Father-son contact:	low	high
Give book to son	NS	NS
Take son library	.71 (1.82)	NS
Recommend books	NS	NS
Ask book opinion	NS	NS
N =	68	66

It was noted earlier that whether or not fathers had subscribed to magazines because they would interest son is correlated with only one variable--fathers' own reading in sports-outdoor publications. Dividing the sample according to identification does not change any of these data.

A somewhat different picture emerges for giving magazine subscriptions, however. Table 1.5 shows relationships between fathers' magazine giving and sons' reading in each of the magazine categories, according to level of identification. It is helpful to take these findings in reverse order, starting with those for mechanical magazines.

Table 1.5

RELATIONSHIPS BETWEEN FATHER GIVING SON A MAGAZINE SUBSCRIPTION AND SON'S MAGAZINE READING, BY SON'S IDENTIFICATION WITH FATHER

	Son's Identification with Father	
Son's Magazine Reading:	low	high
General interest adult	.48 (1.65)	NS
News	NS	NS
Sports-outdoor	NS	NS
Mechanical	NS	1.00 (*)
N =	68	66

*z-values for Gammas of 1.00 cannot be calculated.

Data reported earlier showed that fathers who gave subscriptions tend to be readers of mechanical publications, and sons who had received some magazine subscription are also readers of Mechanics Illustrated and the like. The correlation in Table 1.5 specifies the effects of magazine giving further. It is the high identification families where fathers' giving correlates with sons' reading. This is not remarkable given the obvious feedback from these publications to leisure activities that are shared by many fathers and sons.

Identification is not a factor for either sports-outdoor reading, or news magazine reading. But it is a factor in sons' reading of general interest publications; magazine giving correlates with sons' magazine use among low identification pairs.

DISCUSSION

In seeking an explanation for this curiosity, one needs to re-examine the variables describing parent-child social contact about print. Although these questions have been asked separately of mothers and fathers, there is no clear way to distinguish whether the respondent is referring exclusively to his own behavior, or to behavior he considers a joint endeavor by both parents. Most likely, joint behavior is only rarely the basis for reports concerning conversations with the child or taking son to the library, considering the specific content of questionnaire items eliciting these data. But the case is much less clear concerning book giving, very likely a joint act, and magazine giving.

In fact, there is a substantial correlation between mothers and fathers in magazine giving ($G = .47$, $z = 2.11$). In light of our earlier data revealing mothers' impact on their sons' reading of general interest magazines, the Gamma of .48 for the low identification group in Table 1.5 may signify a complex set of relationships.

In these low identification families, many of the fathers who claimed magazine giving may have been reporting joint behavior--perhaps in some cases, magazine giving that was initiated by mother. A mother may be the major socializer of reading in popular periodicals like Look and Readers Digest primarily where son tends to reject his father as a behavior model.

The fact that father-son similarities in print use are not consistently greater for high-identification pairs suggests there is a content aspect to identification that interacts with various print media. It was pointed out that the attributes included in the identification measure include a number of statistically independent dimensions--achievement and affiliation skills, to name just two. Thus, two boys with equal identification scores might have quite different bases for their valuation of father.

The consequences of identification for print use may vary depending on the extent to which print content is relevant to satisfying various motivational needs constituting the basis for a son's identification. We plan to examine this possibility by creating a variety of identification scores for the several attribute dimensions in the questionnaire. Subsequent papers will report these findings.

By now it is apparent that some print media are what might be termed "mother-relevant," and some are "father-relevant"--at least with respect to adolescent boys. Relevancy here is defined in terms of a parent-child correlation in media use, or evidence that some form of parent-child social contact affects sons' media use.

It is unfortunate that the present analysis can not account for the extent these tenth-grade boys value both parents as models, and that the sample size is not larger. In order to account for parents' contributions to socializing children's print use, the following typology of children according to their identification would serve as a minimum set of contingent conditions:

		Identification with Mother	
		low	high
Identification with Father	low	family rejecters	oriented to mother
	high	oriented to father	family accepters

Terms such as rejection, acceptance and orientation refer to the value of parents as general behavior models. With a more exhaustive measurement of the appropriateness of identification attributes, one could specify these valuations of parents in the terms that each child considers most important in judging the imitation value of each adult.

It is more difficult to apply this scheme to other sources of media socialization in the child's environment. The peer culture and school contain a multitude of actors with whom a child can identify for varying lengths of time. The contributions these persons make to a youngster's use of the mass media are not susceptible to cross-sectional research. Retrospective accounts of the influence of teachers or the attractiveness of peers are no substitute for concurrent observation, either.

Section Three: Fathers' and Sons' Content Interests

Data about book and magazine reading, if appropriately categorized, can disclose much about leisure displacement and something about a person's topical interests. For example, it seems fair to conclude that readers of Sports Afield are interested in outdoor sports, although some salmon fishers never touch a shotgun, and some hunters are never found at the stream or ocean.

Information about respondents' interests that can be gleaned from reading choices drops off sharply when we consider such heterogeneous media as Life magazine, or newspapers or simply book reading. For this reason, we have gathered a variety of data that describe respondents' interest in specific print messages, where the topic and action are fairly specific.

The analysis in this section will probe the extent of father-son similarity in content interests, whether sons' content interests are associated with social contact with their fathers about print, and whether father-son similarities are related to the extent of sons' identification with father as a behavior model.

Our data include only fathers and their boys. Mothers' content interests were not measured due to cost considerations arising from the length of interviews.

METHOD OF MEASURING CONTENT INTERESTS

Each father and son in the sample completed a questionnaire in which he indicated reading interest in 75 newspaper and magazine articles and books. Three aspects of our methods will be described: procedures for interest measurement, selection of print items for the questionnaire and analysis of responses into content clusters.

Interest measurement was accomplished by instructing respondents in the use of a "Thermometer Rating Scale." Fathers and sons were presented with lead sentences from newspaper articles with titles of magazine articles and with synopses of books. They rated each using the scale, which was calibrated from 0, "extremely sure not to read," to 100, "extremely sure to read." Respondents were asked to mark the number of the scale that best indicated how likely they would be to go ahead and read the rest of the article or book exerpted in the questionnaire.[1]

Newspaper items were selected from current stories in the news to fill five dimensions of content disclosed in earlier factor analyses of boys' reading interests (see Study 2, section one). These dimensions were public affairs, science, sports, teen news and a factor called speed and violence.

Magazine items and books were drawn by probability sampling methods from the reading choices indicated in the earlier survey of 9th and 11th-grade boys. For magazines, publications listed by the earlier sample as regular reading choices constituted the universe sample frame. Every nth publication in this list was drawn. Current issues of the publications were obtained. Articles were drawn randomly from the table of contents of each magazine; the number of articles selected from each publication was proportionate to the number of boys who had listed the publication as part of their reading habits.

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[1] Study 2, section one, provides additional details about this technique and cites earlier research on content interests. Another analysis of teenagers' reading interests, including those of girls, is contained in Peter Clarke, Reading Interests and Use of the Print Media by Teenagers (mimeographed report: Communication Research Center, University of Washington, 1968).

Books were sampled in much the same way. Book mentions by the earlier sample were listed, and every nth item was drawn. Lead sentences and headlines describing newspaper and magazine items were usually modified for clarity from the actual articles, and synopses of books were edited somewhat from descriptions in directories of books for librarians. The questionnaire represented 25 newspaper items, 29 magazine articles and 21 books. Each item was labeled according to the medium from which it was drawn.

Analysis of item responses into content cluster scores was confined to newspaper and magazine articles; each book rating was kept distinct as an individual reading response. Clusters were identified by examining fathers' and sons' inter-item correlation matrices. The largest correlation between an item pair in one matrix was checked in the second matrix to insure the relationship was at least statistically significant there. Items were added to each cluster by this comparison process until none could be found that correlated at a significant level with all items already in the cluster--among both fathers and sons.

At one point this procedure was modified to yield two clusters instead of one. This was with sports news and articles. All items intercorrelated according to the criteria above, but two scores were constructed by separating spectator from participant sports activities.

The resulting clusters of newspaper and magazine items, with an example from each, are:

(1) Public affairs. "Secretary of State Rusk issued a statement today designed to dampen speculation concerning differences between Washington and Saigon over peace talks with Hanoi."

(2) Science. "New surgical methods allow doctors to replace a larynx with a substitute voice box made from the patient's own tissues."

(3) Spectator sports. "Merlin Olson tells of the difficult and often frustrating life led by the professional football player on defense--playing the game without the ball."

(4) Participant sports. "The complete story, including plans, on a new and very effective portable duck blind."

(5) Violence. "Robert Roden is being held on $100,000 bail on charges of plotting to murder a government witness in the New York city hall kickback case involving the Mafia."

(6) Teen. "Aretha Franklin's booming voice made her the top female recording artist last year."

(7) Car and hot rod. "Tearing up major meet competition is 'old hat' to up and coming Super Stock star Wally Booth. Here's why competitors shrink back when the SS/D class is called to the line."

Statistic for reporting findings.

Content interest scores for the various dimensions approximate normal distributions among fathers and sons. To the extent that response scales represent probability estimates of reading likelihood, the metric has ratio properties. Consequently, product-moment correlation coefficients are used for content interest data. Relationships with p-values less than .10 (two-tailed) are shown.

RESULTS

Father-son interest similarities.

Table 1.6 shows product-moment correlations between fathers' and sons' interest in each of the seven content clusters derived from ratings of newspaper and magazine items. Considerable variability is apparent in the extent to which pairs of fathers and sons direct their attention to the same print messages. There is a substantial relationship for information about participant sports, activities that both parent and boy might enjoy or avoid. Lesser relationships emerge for automotive news, teen items, public affairs and spectator sports. There are no correlations for science or violence.

Table 1.6

FATHER-SON CORRELATIONS IN NEWSPAPER AND MAGAZINE CONTENT INTERESTS

Content interests:	r
public affairs	.21*
science	NS
spectator sports	.18*
participant sports	.48**
violence	NS
teen	.24**
car and hot rod	.30**
	N = 137

*p< .05
**p< .01

There is an apparent inconsistency between these data and the correlations for fathers' and sons' magazine reading. There is no relationship for reading sports and outdoor publications, but significant correlations for interest in the topics most featured by these magazines. A plausible explanation is that much of fathers' and sons' information seeking about sports is satisfied by newspaper reading; individual magazines may be used to satisfy specialized interests in, say, skiing or basketball, where there is less likelihood of similarity in leisure activity.

A similar explanation might pertain to the father-son correlation involving interest in articles about cars and hot rods. The significant relationship contrasts against father-son differences in reading car magazines; 20 per cent of the boys, but only one father, reported some magazine reading in this category. Most of these publications are distributed via newsstand sales, and many of the boys' purchases may never reach home where they would be available to fathers.

Sons' content interests.

The extent of sons' interest in the various kinds of newspaper and magazine content has proved immune to explanation by independent variables studied here. Despite the overall father-son correlations reported in Table 1.6, there is no evidence that social contact about print between a boy and his father is associated with the degree of son's content interests--in public affairs, sports or any of the other categories. A father's magazine giving is not related to his or his son's content interests; neither are the recencies of recommending a newspaper or magazine item to son, nor of asking his opinion about something he read.

Recommending items and asking son's opinion do not emerge as intervening variables, either. Fathers were divided on each of the content interest scores into groups with above-average and below-average interest. Within each group correlations were examined between recency of social interaction with son and son's content interests. This analysis tests whether interaction as an orienting behavior is contingent for its "effects" on fathers' own media interests. No significant relationships were found.

Considering the earlier findings that disclose mothers' importance as print socializers, it is unfortunate we did not collect data about their content interests that would enable parallel study of mother-son pairs. It seems likely, too, that the contributions of parent-child discussions to the development of children's content interests will remain undiscovered until more complete accounts are obtained of the topics talked about. Youngsters' perceptions of their parents' interests should also be examined.

Social interaction about print and father-son interest similarities.

Although social interaction about newspapers and magazines is not an intervening factor, it does appear to be a contingent variable for father-son similarities in content interests. At first consideration, this should not be surprising. Discussions between father and boy would seem a necessary condition for the development of shared interests; families in which father and son talk about print items should exhibit greater similarities in fathers' and sons' content selections.

Despite the logic of this hypothesis, the data contain some surprises, as Table 1.7 shows. For each of the interaction variables recency was dichotomized at the median to yield two groups of families with nearly equal numbers. For recommending items to son, the median fell between having done this within the last week, and longer ago or never. For asking son's opinion, the median divided families in which this had ever occurred, and those where it had never occurred. The noncomparability of these divisions should be kept in mind when comparing results for the two indices. The coefficients are product-moment correlations.

Table 1.7

CORRELATIONS BETWEEN FATHERS' AND SONS'
CONTENT INTERESTS,
BY RECENCY OF TALK ABOUT NEWSPAPER OR MAGAZINE ITEMS

	Father-Son Discussions:			
	Not Recent		Recent	
Content Interests:	recommend	ask opinion	recommend	ask opinion
public affairs	.28*	.31**	NS	NS
science	NS	NS	NS	NS
spectator sports	NS	.26*	.28**	NS
participant sports	.49**	.31**	.51**	.63**
violence	NS	NS	NS	NS
teen	NS	NS	.23*	.34**
car and hot rod	.28*	.33**	.32**	.27**
N =	61	76	76	61

*$p< .05$
**$p< .01$

Table 1.7 shows the sample of families divided two ways--according to recency of father recommending items and recency of father asking son's opinion about items read. Perhaps the most startling finding is the consistency with which father-son similarities about interest in public affairs characterize families in which discussions about print rarely occur. Shared interest in government and politics is not associated with frequent social interaction about items in the news.

Just the opposite picture emerges for interest in teen items. Shared degrees of interest mark the families where boys and their fathers talk about newspaper and magazine articles.

The data for interest in spectator sports add further variability to the findings. Father-son similarity of interest is found among families where father never asks his son's opinion about something he has read, but does recommend print items to his son.

The data for interest in science, participant sports, violence and automotive developments are consistent across all social-interaction groups. None of the father-son groups shows interest similarities for science and violence. All of the groups show similarities for participant sports and car and hot rod items.

When faced with inexplicable reversals in findings, as in Table 1.7, there is some temptation to construct an elaborate theoretical argument to account for the differences. An alternative, and simpler strategy is to examine the research design for the absence of mediating variables that are likely culprits for producing the observed interactions. In this instance, a minimum addition to the design is the frequency of attention devoted to each content topic--public affairs, sports, etc. --during father-son conversations.

The correlations for shared interest in public affairs illustrate the need for this new variable. The absence of relationships among father-son pairs who talk about newspapers and magazines suggests that governmental topics are rarely included in these discussions--indeed, that topics that occur may compete with public affairs for fathers' and sons' attention.

A much clearer picture might emerge if we were to assess the recency of asking son's opinion about political coverage he had read, about sports developments, about items of teen interest, and so on. Then we could explicitly relate the contributions of parent-child social contact to the development of a youngster's print behavior. Topic specificity might also be sought when measuring the recency of recommending print items to son.[2]

There is a dilemma inherent in these variables of father-son discussion, however. While topic-free contacts about the print media are not consistent predictors of father-son similarities in content interests, the general rarity of these discussions limits the opportunity to construct topic-specific measures. It is problematical whether social interaction between father and son facilitates parent-child similarity in content interests.

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[2] The limitations imposed by generality in the discussion measures parallel those noted for parents' magazine subscription behavior. See footnote 6 , p. 10 .

However, for interest in violence and in spectator sports, father-son similarities are found among low identification pairs.

Sons' content interests in books.

There are no relationships between fathers and sons in their interest ratings of book synopses. Furthermore, boys who are heavy book readers do not exhibit any distinctive pattern of book interests.

Book interests do bear a relationship with the centrality of book reading among boys' leisure interests, however. As part of a questionnaire dealing with leisure activities, boys rated how much they enjoyed reading books in their "spare time--that is, in the time after school and on weekends." Scales ranged from "I do not like doing this at all" to "I like doing this very much."

Interest in many of the 21 book synopses correlated significantly with the appeal of book reading as a spare time pursuit. Interestingly, the books that correlate most highly turn out to be the less popular works among this sample of boys. For example, interest ratings of Camus' The Stranger correlate at .23 with enjoyment of reading, but The Stranger is considered an interesting work by only a minority of boys. By contrast, John Hersey's Too Far to Walk is a popular reading choice, but interest in this book does not correlate with enjoyment of reading.

Expressed another way, this means that if one knows how much a boy likes book reading, one knows more about his interest in reading less well-liked works than one knows about his interest in popular fare, like the Dirty Dozen or James Bond thrillers.

Identification with father and content interests.

As we have just seen, the "obvious" variable of discussion about print sometimes fails to identify pairs of fathers and sons who share content interests. The same holds true for son's identification with father.

Table 1.8 shows father-son correlations in content interests, according to level of identification. The extent of similarity is approximately the same, irrespective of identification, for interest in public affairs, participant sports, car and hot rod information and teen items. Identification also is not associated with similarity of interests in science; for this latter category there are no father-son correlations significantly greater than .00.

Table 1.8

FATHER-SON CONTENT INTEREST CORRELATIONS,
BY SON'S IDENTIFICATION WITH FATHER

	Son's Identification with Father	
Content Interests:	low	high
public affairs	.21#	.33**
science	NS	NS
violence	.28*	NS
spectator sports	.29*	NS
participant sports	.32**	.58**
car and hot rod	.33**	.24*
teen	.28*	.24*
N =	68	66

#p< .10
*p< .05
**p< .01

Book content interests are unrelated to any of the measures of parent-child contact about books analyzed earlier.

DISCUSSION

The father-son correlations in content interests are clues to areas in which socialization activity takes place between the generations. It would appear that participant sports and spectator sports are quite different foci in attracting joint attention by fathers and sons.

The absence of a correlation for science news and articles can probably be explained by the recency with which these topics have become salient to the general public. Science news attracts the highest interest ratings among boys, with the exception of car and hot rod items. As the data in Table 1.6 suggest, it represents a discovered interest of their own, independent from fathers' modeling.

The absence of a correlation for violence may reflect rarity of family conversations about rapes, murders, highway accidents and other wholesale norm violations that make news headlines. There certainly is no lack of interest in these topics among both fathers and sons.

Our attempts to explain father-son similarities in content interests have not met with impressive success. Part of the confusion in results might be disentangled by a joint analysis controlling for son's identification with father and extent of father-son discussions about print. One would expect discussions to be effective in promoting similarities wherever sons value their fathers.

Where sons reject their fathers as behavior models, discussions might actually exert the reverse effect. By talking about print with son, father discloses his interests, thereby enabling avoidance of those interests by son.

Unfortunately, the number of cases in the present study is too small to permit a powerful test of these hypotheses.

Section Four: Independence Training and Sons' News Magazine Reading

A child's access to and use of the mass media represents a major part of his exploration of the social environment beyond family, school and friend. Earlier sections of this report have dealt with explicit parental behaviors that might foster exploratory behavior via print.

There is a more remote, but relevant aspect to parental socialization behavior, though. When a mother or father sends a youngster into the print media, the parent loses a measure of social control over his offspring. Print exposure is an individual act, not a shared experience. Although one can exchange reactions to print messages, they normally are not consumed in group situations, and it is difficult for a parent to supervise a child's selection of books and magazines closely.

Independence training is a means by which parents encourage autonomy by their child. To be sure, parental willingness to relinquish social control over the child may stem from confidence that ingrained super ego functions are secure. But generally, one might expect the autonomous features of print use by children to be compatible with the apparent importance of autonomy to the parent who engages in independence training.

The hypothesis just sketched requires considerable refinement, considering the multi-dimensional nature of independence training and, as is clear above, print behavior. First, let's take independence training.

Following Winterbottom, we have conceptualized this parental behavior as an expectation that the child should reach decisions by himself, without needing information from parents or parental restrictions on the range of choices.[1] The extent of independence training is represented by the age at which the parent expects decision making by the child. The younger the age, the more intense the expectation of independence.

Many spheres of a child's life invite decision making, though, and it is unlikely that many parents have equivalent hopes for autonomy with respect to all of them. The parent who expects his child to choose his own playmates at an early age may not be willing to see the youngster make his own religious affiliation or form occupational plans early in life. For families that live in homogeneous neighborhoods, deviant childhood friends are not much of a threat, but disapproved denominations and disappointing careers may be.

We have chosen to focus on a limited, but important kind of independence training that involves parental supervision of major value areas in life. This is a parent's willingness to see the child make up his own mind about religious matters and about political beliefs, and furthermore, a willingness to see the child make his viewpoints visible to others, even though they may disagree. Our factor analysis of parents' independence training shows these parental attitudes to be highly intercorrelated, and to be only modestly related to independence training involving other adolescent behaviors with non-ideological value implications, such as matters of clothing and grooming.

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[1] Marian R. Winterbottom, "The Relation of Need for Achievement to Learning Experiences in Independence and Mastery," in John W. Atkinson (ed.) Motives in Fantasy, Action and Society (Princeton: D. Van Nostrand, 1958).

For data concerning some of the antecedents of independence training, see David C. McClelland, A. Rindlesbacher and Richard deCharms, "Religious and Other Sources of Parental Attitudes Toward Independence Training," in David C. McClelland (ed.) Studies in Motivation (New York: Appleton-Century-Crofts, 1955).

In what sense is print behavior by youngsters a matter of relevance to independence training concerning values? One answer can be found by imagining the situation facing the child who is not encouraged to develop autonomy in this area. Since he is rewarded for conformity to parents, parental cues are more useful for maximizing satisfactions within the family than are potentially discordant cues from the wider environment. Reading about politics and religion can be upsetting, unless materials are closely supervised by parents; a studious attention to parents' values, or an avoidance of value questions altogether, are safer strategies.

Information seeking about major value problems is not equally facilitated by the various print media. Reading books is certainly one way to find out about religion and politics, but our measure of gross exposure is too general to net value-oriented reading. General interest magazines are just that. Sports, outdoors and mechanical publications have other attractions.

It would seem, however, that readership of news magazines is likely to result in exposure to political and other value questions; news magazines can also be used to obtain information that embellishes opinions and increases one's confidence in discussions with others. Our research with adult men shows use of news magazines to be the most consistent correlate between media use and information about public affairs.[2]

Consequently, we hypothesized a positive correlation between value independence training by parents and reading in news magazines by sons.

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[2] Peter Clarke and Kenneth Jackson, "Media Use, Information Seeking and Knowledge About the War in Vietnam," Journalism Monographs (in press).

METHOD OF MEASURING INDEPENDENCE TRAINING

A modification of the Winterbottom method was developed for assessing independence training with respect to adolescent boys. Each parent completed a self-administered questionnaire asking him to indicate the approximate age by which he thought his son should be doing each of 13 things. If a parent thought his son should not do a particular thing, he was asked to indicate this on the questionnaire.

The four value items ("to stand up for his own ideas," "to choose what church to belong to--if any," "to say what he thinks about issues in the news, even though others disagree," and "to make own decisions about political beliefs") were positioned randomly in the list of items. Separate factor analyses of mothers and fathers disclosed these value items as high loaders on a single factor. Another high loader was "to choose his own books and magazines to read." This aspect of independence training refers explicitly to print objects a child might use to satisfy interests in value problems. Findings for this form of independence training will also be reported.

RESULTS

The extent of independence training by mothers and fathers is correlated for the several items analyzed here. By now, however, we are conditioned to expect that the relationship between independence training and sons' reading of news magazines may not be equal for both parents.

In presenting these findings, we have distinguished between value items with specific focus on politics and religion, value items concerning independence in social interaction, and the single item about choosing books and magazines. Table 1.9 shows the results.

Table 1.9

CORRELATIONS BETWEEN PARENTS' INDEPENDENCE TRAINING AND SONS' READING IN NEWS MAGAZINES

Independence Training: i :	mother	father
church and politics	NS	NS
social automony	.39 (1.93)	NS
books and magazines	.43 (2.34)	NS

N = 130

The earliness of parents' expectations of independence about religion and politics does not correlate with sons' use of news magazines. Mothers' independence training about autonomous social behavior--standing up for one's ideas and saying what one thinks, even though it may be unpopular--correlates with news magazine reading. And the single item relating to mothers' independence training in use of the print media correlates with sons' news magazine reading.

DISCUSSION

These data confirm mothers' importance as print socializers. Although several decades of research in political sociology have underscored the role of fathers as political decision makers for the family, and as interpersonal sources of political information, mothers emerge as important guides of information seeking about public affairs in magazines. It is difficult to ascertain the reasons for this from the current findings. Perhaps mothers enjoy their edge from the greater amount of time they spend with the young generally. If this is the explanation, time-displacement models of media-use socialization appear more attractive than topic-specific models.

In a time-displacement view, the print media are seen as little more than objects that can be used to consume available leisure time. Whether one reads or views television is simply a matter of media availability and ease of use. Parents who encourage reading have found print media easier. The most effective parent in socializing print use is the one with greatest child contact--never mind the kinds of information one might seek in the print media, as opposed to television or other sources.

A topic-specific model would expect to find fathers' independence training more relevant to sons' use of public affairs media like news magazines. Mothers would be expected to exert their influence on topics of their own specialization--perhaps interpersonal behavior and grooming.

The present research design is incapable of confirming the validity of these contrasting views or print socialization, but the drift of evidence thus far favors the time-displacement model. More adequate study is required of the family context of children's reading, including both sexes and several age levels, and including elaborations of the variables studied here.

INTRODUCTION TO STUDY 2

It will be recalled from the Preface that Study 2 was actually conducted prior to Study 1. It helped answer some preliminary questions concerning relationships between reading skills and print behavior among adolescent boys and provided opportunities to pre-test and item-analyze measures of content interests.

The first section of Study 2 is excerpted from an article in Journalism Quarterly (Vol. 45, pp. 7-13, 1968).* While it was addressed to newspaper editors bent on establishing special news sections for teenagers, it presents data of more general interest. Of particular value are the analysis of boys' interest in print messages into a reduced number of content types, the estimates of gross interest in these types, correlations among content types and relationships between these reading interests and other aspects of print behavior.

The second section describes relationships between reading skills and content interests in newspapers, magazines and books. Some implications are drawn for teachers' use of print materials in language arts instruction.

The correlations reported in Study 2 are product-moment coefficients. Where the properties of variables seemed questionable for using this statistic, as in number of books read, non-parametric analyses were also conducted. There was no substantial difference between the two sets of statistics.

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Section One: Does Teen News Attract Boys to Newspapers?

Newspaper editors are increasingly troubled by circulation trends showing persistent per capita declines during recent decades.[1] Ruggles has analyzed correlations between demographic variables and circulation changes and attributes much of the decline to shifts in the social structure.[2] The increased proportion of young people aged 10 to 19 in the population is especially critical, since these persons traditionally have been low newspaper readers.

As awareness of circulation trends has spread through the newspaper industry, many news executives have responded by trying to lure the young reader with special news sections or features for teenagers. This content differs somewhat among papers, but the usual mixture contains items about teen social affairs, school events, problems of dating and social relationships, entertainment figures, records, cars, clothes and various consumer goods marketed for adolescents.

Some of these editorial ventures appear to reflect the expectations of middle-aged newsmen about what teenagers read. The research reported in this paper was conducted on the chance that a generation gap may have introduced some error in these expectations.

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[1] The latest figures are particularly startling. Between 1960 and 1965 U.S. daily circulation increased by about 1,476,000. In the same period the number of households increased by three times that figure, and the population aged 14 and over increased by more than seven times that figure. For other data see the annual Convention Reports, American Newspaper Publishers Association.

[2] Lee Ruggels, "Some Correlates of Newspaper Circulation Change," paper delivered at the annual convention, Association for Education in Journalism, Iowa City, Iowa, August 1966.

Dependence on "teen news" as a means of luring young readers to the newspaper rests on one or more of the following assumptions:

(1) There is a category of teen news sufficiently defined so that an editor knows when he is publishing a teen item and when he is not. It is important also that the editor's category of teen news stimulates homogeneous reading responses by a young reader; otherwise editorial judgments using this category will not result in predictable reactions by the audience.

(2) Teen news is popular reading material.

(3) Teen news is a stimulus with different characteristics than other editorial material. Thus, teen news either (a) does not appeal to an audience that overlaps completely with existing young newspaper readers, or (b) does not totally overlap the content interests of the existing audience. In the first case, using teen news would be expected to add new newspaper readers to the audience. In the second case, teen news would be expected to increase reading traffic by youngsters already exposed to the paper.

(4) The inclusion of teen news not only generates a new audience (or additional product traffic), but is helpful in enlarging the permanent newspaper audience. Editors using teen news expect that youngsters will develop the newspaper reading habit and that as they mature they will discover adult content that satisfies their developing reading interests. This assumption is critical because it expresses an anticipated payoff that may not become evident for several years.

(5) The newspaper as a mass medium is equipped to become an efficient and attractive provider of teen news, efficiency being a matter of the newspaper's ability to devote staff and news hole to teen news in such a way that this investment does not damage the paper's capacity to achieve other important goals. Attractiveness here refers to whether adolescents can be persuaded that newspapers are a rewarding medium to scan for teen news, in addition to special interest magazines and television. These other media may technically and economically be better equipped to compete for the youth market on the basis of teen content.

Most of these assumptions are familiar ingredients of rational decision-making about editorial content. However, two of the points need to be considered jointly because they conflict.

Adding content to the paper because it attracts a different audience creates a newspaper product with marginal reward value for this different audience--unless the audience widens its news interests as a result of such exposure. This widening is a distinct possibility among young people growing up, especially if there are other news items in the paper similar to teen news on some stimulus gradient. But lack of stimulus similarity is the cause of audience differentiation.

Thus, editors face a dilemma with respect to teen news. It may capture a new audience among newspaper non-readers, but these new readers may be especially difficult to convert into consumers of other news content.[3]

This section of study 2 reports data from a sample of ninth and eleventh grade boys dealing with questions raised by four of the assumptions above. (The issues listed under the fifth assumption are not examined here; these refer to management values, or require data not gathered in this study.) Variables necessary to explore these assumptions include children's content interests in the news media and extent of information seeking from print media.

Analysis of content interests would disclose whether there is a category of teen news, and the extent to which teen news shares audience appeal with other editorial copy. Analysis of relationships between interest in teen news and print use would reveal whether this content appeals to non-readers of newspapers and, if so, the likelihood they can be lured to newspapers permanently.

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[3] For another view of the question of "editorial mix," see Jack B. Haskins, "The Editorial Mix: One Solution to a Magazine Editor's Dilemma," Journalism Quarterly, 42:557-62 (1965).

Questionnaire.

Data were gathered from youngsters at school through the use of group-administered questionnaires. Children replied anonymously to a lengthy schedule eliciting information about leisure interests, exposure to the mass media and news reading interests. The last, of central importance here, consisted of 109 news story and feature leads extracted from recent issues of newspapers and magazines (e.g., "Narcotics use in King County was termed a 'growing, serious problem' yesterday by Superior Court Judge Robert F. Utter.").

The news leads do not constitute a probability sample of content in daily newspapers. Items were selected to represent as topically diverse a sample of news and features as possible. Bush's content analysis categories and other a priori systems were consulted as sampling frames.[4] Science news and stories focusing on teenagers' activities were heavily represented to provide stable estimates of reading interests in these areas.

Children used a Thermometer Rating Scale to indicate the likelihood they would read further in each of the news items. The scale was calibrated from 0, "extremely sure not to read," to 100, "extremely sure to read."[5]

In all, data collection took slightly less than two hours.

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[4] Chilton R. Bush, "A System of Categories for General News Content," Journalism Quarterly, 37:206-10 (1960).

[5] The method is similar to one described by Jack B. Haskins, "Pretesting Editorial Items and Ideas for Reader Interest," Journalism Quarterly, 37:224-30 (1960).

Sample.

The sample contains nearly equal numbers of 9th and 11th grade boys enrolled in three school districts outside Seattle. Systematic random samples were drawn from each grade level and each school (junior and senior high schools) by using enrollment files. The resulting 381 children in this study are 86% of the original sample draw. Absences from school and schedule conflicts account for the remaining 14%.

RESULTS

Is there a category of "teen news?"

Analysis of this question requires studying how children perceive news stimuli. The perceptual-response variable used here is the degree to which a child classifies each story into a category of things he would like to read more about. News items placed in similar categories by the 381 boys are then studied to infer common stimulus properties.

As an initial step, Thermometer Scale ratings of the 109 items were factor analyzed and rotated to varimax criterion in order to identify news stories with low communality and stories that split their common variance across several factors. Items with low communality were eliminated, since they were unreliable measures of reading interests encompassed by the entire questionnaire, an instrument that included great diversity by *a priori* standards. A few items with variance distributed across several factors were eliminated, since complex factor structure is a sign that an item conveys several meanings and would be an ambiguous indicator of underlying factor structure.[6]

Forty-three items were discarded for these reasons; the remaining 66 stories were factor analyzed and rotated according to the oblimax criterion.[7] Five statistically significant factors were extracted which accounted for 78% of the common variance among items.

Factor I: Public affairs. Items loading highly on this factor deal with political, educational, social and governmental issues, whether on an international, national, state or local level. Illustrative stories include a U.S. Supreme Court ruling on Congressional redistricting, prospects for the Governor's legislative program in the state House and Senate, an announcement by Rep. Gerald Ford concerning a GOP position paper, a change in wholesale food prices, a meeting of state cultural leaders, news of the cultural revolution in Red China, a political meeting in Trafalgar Square, West German policies on reunification and developments in local mass transportation problems.

Factor II: Science. High loaders all concern some aspect of biological or non-biological science and technology. Items include a surgical method to replace the human larynx, discovery of a tenth moon orbiting Saturn, the possibility of scientifically controlling tornadoes, demonstration of a new helicopter, improvements in a rocket vehicle, discovery of a new vulture by zoologists and news of electronic detection of heart disturbances.

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[6] Split-variance items are important for estimating correlations between factors, a matter discussed below. The few items eliminated for this reason loaded modestly on the public affairs and science factors. Thus the correlation reported in Table 2.2 between these two factors is a slight underestimate.

[7] For discussions of the rotation criteria used here, see Harry H. Harman, Modern Factor Analysis (Chicago: University of Chicago Press, 1960).

Factor III: Speed and violence. A factor containing news about automobiles and racing, crime and accidental death. Items include a personality feature about a prominent drag racer, a background story about the Monte Carlo auto rally, the performance of a new racing engine, an arrest following a shooting death, leniency extended to a man convicted in a death-driving case, deaths and injuries resulting from a three-car auto crash and the arrest of two hold-up men.

Factor IV: Teen news. Items loading highly on this factor represent most topics thought to be interesting to teenage boys, except the car and racing stories in Factor III. Items include what boys' hair styles appeal to girls, news about the Rolling Stones, a guide to local dances and teen activities, a background piece on rock-and-roll rhythm, a teen opinion column about the images of adult occupations, the current top-forty record hits, a column about emotional conflicts between parents and teenagers and a fashion item about boys' shirts.

Factor V: Sports. High loaders include spot news and background stories about skiing, football, baseball and ice hockey.

The content of items in Factor IV confirms editors' judgments that news about the teen culture generates homogeneous reading interest among adolescent boys. The factor accounts for 6% of the common variance; of course this figure might have been greater had more teen items been included.

What are the stimulus properties of teen news?

Many of the news stories and features in Factor IV deal with social relationships by teenagers and problems concerning those relationships. The news leads are studded with phrases such as rock-and-roll rhythm, dances, top-forty, teenagers and parent-child conflicts.

News about cars and hotrodding did not emerge on the teen news factor. These features appealed to the same youngsters attracted by crime and violence in the news.

Because such items tend to emphasize a breakdown of community norms, one might hypothesize that a continuum of rebellion-cooperation distinguishes between the speed-and-violence and teen news factors. There is some evidence for this hypothesis in the present study. One news story that loaded almost equally on the two factors (.44 and .46) seems to convey a concern for social contact with peers and a rejection of adult authority: "Persuasive teens challenge the idea that a youngster's social life is a privilege to be granted or withheld at parental pleasure."

Further analysis of the content characteristics of teen news must await research that uses a larger number of items than was employed here.

Is teen news popular with teens?

Table 2.1 shows that the average interest rating of teen news items is equivalent to reading stories for science, speed and violence and sports stories. These three means are in the "likely to read" zone of the thermometer scale.

Table 2.1

MEAN THERMOMETER RATING SCORES FOR HIGH-LOADING NEWS ITEMS ON EACH OF FIVE FACTORS

Public Affairs	Science	Speed and Violence	Teen News	Sports
27.1	60.3	64.2	59.4	51.4

Table 2.1 also indicates that boys between 13 and 16 years of age avoid public affairs news, which absorbs a substantial share of most news holes. The mean rating of 27.1 is between "not likely to read" and "extremely sure not to read" on the thermometer scale. The average sports item was rated about midway on the scale.[8]

Does teen news share stimulus properties with other news content?

The simplest way to assess the amount of traffic overlap generated by teen news is to examine the correlations among the five news interest factors shown in Table 2.2. It is clear from these data that the teen factor is relatively independent from other dimensions of [illegible] news interest except speed and violence, with which it correlates at .30. Teen news appears to have a distinctive appeal.

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[8] It is inappropriate to test the statistical significance of differences between the means in Table 2.1 since the news items do not constitute a probability sample of newspaper content.

Table 2.2

CORRELATIONS AMONG FIVE OBLIQUE FACTORS OF NEWS-READING INTERESTS

	Science	Speed and Violence	Teen News	Sports
Public Affairs	.60**	.32**	NS	.44**
Science		.35**	-.23#	.44**
Speed and Violence			.30*	.43**
Teen News				.23#

#p< .10
*p< .05
**p< .01

N = 66 items

Does teen news attract newspaper non-readers more than other editorial content?

Table 2.3 contains correlations among the factor scores on each of the content dimensions[9] and measures of reading behavior and reading skills. Factor scores represent the degree of reading interest in each type of content as deviation from the average interest among 373 teenagers in the sample.[10] The extent and intensity of newspaper exposure was measured in a variety of ways--average time spent reading weekday issues of the paper, an index combining recency and frequency of newspaper reading and two attitude questions asking how much youngsters look forward to reading the paper and how much they would miss it if it were unavailable.[11]

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[9] Factor scores are obtained by computing multiple regressions between the 66 news items and each factor. The score for each person on a factor represents the sum of each of his reading interest scores multiplied by the slope of the news item on the factor, divided by the item's standard deviation. These values were translated into normal scores. See Harman, op cit., pp. 337-48.

[10] Eight boys were excluded from the analysis reported on Table 2.3 because of missing data on one or more variables. Product-moment coefficients are shown. In cases where a variable distribution was skewed (e.g., books read), rank correlations were computed, but these values did not differ from the product-moment correlations.

Table 2.3

CORRELATIONS BETWEEN FACTOR SCORES AND MEASURES OF READING SKILLS AND READING BEHAVIOR†

	Public Affairs	Science	Violence	Teen News	Sports
Newspapers					
daily reading time	.22**	.20**	.20**	NS	.13*
recency-frequency of reading	.18**	.13*	.12*	.11*	.16**
"want to read"	.29**	.20**	.13*	.11*	.20**
"would miss paper"	.34**	.25**	.20**	.12*	.28**
Other print media:					
books read in last 30 days	.19**	.21**	NS	NS	NS
reading in general interest adult mags	.23**	.16**	.15**	.13*	.13*
reading in news mags	.37**	.24**	NS	NS	NS

*p< .05
**p< .01

N = 373 boys

†For explanation of reading behavior measures, consult Note 11.

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[11] Reading time estimates were yielded by a question asking youngsters living in daily newspaper homes to "think for a moment about the newspapers that come during the week," and to estimate how much time they spent, on the average, "reading a weekday issue of the paper." The recency-frequency measure was based on two items asking about the "last time" each youngster had read a newspaper, and "how often" he read something in the newspaper.

The two attitudes questions are items 54 and 55 from the "General Satisfaction" scale by James E. Brinton, Chilton R. Bush and Thomas M. Newell, *The Newspaper and Its Public* (Stanford: Institute for Communication Research, no date.) See p. 19.

Amount of book reading was determined by asking each boy whether he had read any books in the last 30 days "not assigned at school or

Reading interest in teen news correlates less with each of these measures than does interest in any of the four other content areas. The correlations between teen news and time spent reading news magazines and books are essentially zero.[12]

What are the chances that using teen news will enlarge the audience of permanent newspaper readers?

The dilemma of audience differentiation posed earlier confronts the editor who would lure the teen news fan. The correlations in Table 2.3 show no relationship between being a teen news fan and amount of book reading; low positive correlations with reading of adult general circulation magazines (e.g., Life, Saturday Evening Post, Reader's Digest), but no correlation with reading of news magazines (Time, Newsweek). Perhaps the explanation is that teen fans are not avid or skillful readers (see section two of Study 2).

The correlations in Table 2.2 show that teen fans find little else in newspapers of interest except speed and violence and sports, to a lesser degree. It would seem that neither the channel characteristics

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part of your school work." Those who claimed reading were asked to write down the books' titles or authors. Each mention was verified using a directory of American books in print. Scores represent the number of verified mentions.

Magazine reading was measured by asking youngsters to write down the titles of magazines they read. The boys then rated each magazine for how much of the average issue they usually read -- "almost all, most, some or less than that." Magazine titles were categorized, and scores were computed based on number of titles weighted by the readership ratings.

[12] The fact that interest in teen news correlates with the recency-frequency of newspaper reading, but not reading time, suggests that teen fans consume a moderate amount of newspaper content on a regular basis. Some of what they read is speed and violence (Table 2.2).

of newspapers (they are print media) nor most of the content of newspapers are assets in competing for the attention of adolescent boys interested in teen news.

DISCUSSION

The present analysis has demonstrated that teen news is a discriminable category of newspaper content. It is popular reading material among boys aged 13-16. However, correlations between interest in this fare and other print exposure variables suggest that boys will not become permanent newspaper readers because they can find information about dating, records and teenage anxieties in the paper.

The conclusion is, therefore, that teen news is an unprofitable tool for expanding youth readership. Is there an alternative? The data reported in the tables suggest at least two.

Science news and, to a lesser degree, sports news, offer three advantages over teen news in competing for the attention of adolescent boys. Interest in science information is positively correlated with exposure to the print media. Interest in sports correlates less consistently with these variables.

Interest in each of these kinds of news is positively correlated with interest in reading the content that bulks large in newspapers--public affairs, science or sports, and even speed and violence. Correlation with public affairs is especially important if it is argued that the daily newspaper can emphasize this kind of information more than the broadcast media can. Indeed the uniqueness of the newspaper's public affairs role may be the basis for differentiation by adults between newspapers and the broadcast media as sources of news.

If such is the case, any news content showing positive interest correlations with public affairs offers a potential vehicle for audience-traffic expansion among teenagers, who shortly will be adult homemakers and citizens. If this news content also appeals to youngsters who read, so much the better.[13]

It should not be supposed that science appeals only to boys who are heavy newspaper readers. Although interest in this fare correlates significantly with use of newspapers, 12% of the boys with above-average science scores reported zero minutes of reading time for average weekday issues of the paper. Sixteen per cent of these boys said they had last read a paper earlier than "yesterday," and that they usually read papers no oftener than one day a week. Thus science news can be used to expand the youth audience somewhat in addition to stimulating product traffic.

The inferences drawn from data in this study are based on the idea that it is more economical to invest newspaper resources in capturing print-users who desire material contained in newspapers, than on people indifferent to print who do not seek information that newspapers are best able to provide. Such a notion compels editors to make hard decisions about the kind of audience they want, and to concede that newspapers are relinquishing their role as mass media to television.

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[13] Interest in speed and violence content also correlated with some of the print-behavior variables and with interest in other content in the paper. However, research on adult readers shows that interest in crime and police news is negatively correlated with education and with self-identification as a member of the middle class. Both education and level of class identification are increasing in the U.S.; these trends do not auger well for the future attraction of crime and police content. See Roy E. Carter Jr. and Peter Clarke, "Suburbanites, City Residents and Local News," Journalism Quarterly, 40:548-58 (1963).

Finally, interest in science or sports is on a par with teen news. In fact, science, despite its difficulty level, may generate more audience appeal that the top-forty and items of that kind--at least among boys.

Section Two: Reading Interests and Reading Skills

What a child voluntarily reads reflects a great many influences on his life. Parental interests in the mass media, training practices in the home, the child's leisure behavior, his peer contacts and activities at school are important categories of antecedent variables.

As yet we know too little about the process by which children acquire reading interests. Although the results of Study 1 fill some gaps, uncertainty hampers public school teachers, in particular, who must remedy reading deficiencies or plan developmental reading curricula. Often the only indicator teachers have of a child's reading experiences are test scores reflecting present reading capabilities--measures of reading speed or comprehension.

The purpose of this section is to examine relationships between reading skills and children's voluntary reading behavior. It is assumed that skill tests are only gross indicators of reading history; it is unknown whether skills are even associated with current reading interests and behavior.

Research on mass communication has rarely included variables describing decoding skills. Conversely, educational psychologists interested in verbal abilities have only occasionally probed into social aspects of reading and listening behavior. The consequence of this bypassing scholarship has been a disappointing failure to join motivational and cognitive perspectives in studying the individual's use of his symbolic environment.

Among communication researchers, Schramm has hinted at the need to merge these two perspectives.[1] He hypothesized that the probability of exposure to any media message could be expressed as a ratio of expectation of reward/effort required.[2] Explicit research into this ratio has not followed, however.

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[1] Wilbur Schramm, "How Communication Works," in W. Schramm (ed.) The

It is not difficult to establish the theoretical importance of reading skills for an understanding of reading behavior. Accurate decoding of print messages increases the probability that those messages will lead to positive reinforcement experiences for the individual. The skill-reinforcement linkage can be illustrated by referring to a traditional dichotomy between media materials--those offering immediate rewards to the individual, and those offering more delayed rewards.

An immediate-reward message is one for which exposure and consumption responses occur almost at the same time. One reads a cartoon panel in the evening paper, chuckles and experiences some tension release. One reads an account of police action against rioting in a Northern city and feels confirmed in his aggressive predisposition toward blacks, or hears of an auto crash and experiences a thrill of horror.

A delayed-reward message is one for which exposure and consumption are separated in time. One reads of an education bill in Congress,

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Process and Effects of Mass Communication (Urbana: University of Illinois Press, 1954).

[2] "Effort required" can be defined a number of ways--difficulty in gaining access to a communication, complexity of message encoding and level of skill required for decoding. The access problem has been a primary concern of content analysis in mass communication research. A long tradition of readability research deals with encoding style and its effect on response to messages. The third effort variable of decoding skills has stimulated less attention in communication research. It is our concern here.

later discusses the matter with friends at a PTA meeting and gains status as a knowledgeable person. One reads about a proposed expressway route through his neighborhood and sells his home before property values decline.[3]

Each of these reinforcements--tension release, opinion confirmation, titillation, social status, and economic preservation--is made more probable by a high level of decoding skills, but probably to a different degree. Some reinforcements are likely to be more skills-dependent than others.

Skills-dependence is probably an outgrowth of a message characteristic more explicit than immediate vs. delayed rewards. This is the message's consequences in terms of transaction between the reader and his social environment.

By transaction we mean such processes as social interaction and goal seeking. In the examples above, news about summer rioting and freeway construction resulted in greater transaction than the cartoon or the article about highway deaths. Fantasizing and autistic thinking are defined as opposites of transaction.

Transaction depends on normative expectations for its success. Thus when focusing on social uses of the mass media we require a normative definition of decoding skills: To be a skillful reader is defined as extracting information from print messages that most other audience members get. This skill usually is measured by associationist techniques--multiple-choice items testing the individual's ability to recall specific facts he has just read, given some of the verbal context in which those facts appeared.[4]

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[3] Of course, rewards from a message can be both immediate and delayed. For example, one can be reinforced in his dislike of minority groups and use information supporting this dislike to make later voting decisions. For further discussion of these reward concepts, see Wilbur Schramm, Jack Lyle and Edwin B. Parker, Television in the Lives of Our Children (Stanford: Stanford University Press, 1961), Chs. 4 and 6.

The data reported here compare use of the print media by teenage boys with high skills at reading comprehension to those with low skills. Skills are presumed to be a measure of children's potential for using print messages in social transactions. Knowledge of how skills are related to print use is important to teachers when choosing print materials to help low-skill children develop greater potential for transaction.

METHODS

Questionnaire.

Data were gathered from groups of youngsters at school through the use of self-administered questionnaires supervised by staff of the Communication Research Center. Measures for print-use variables were described in section one of Study 2.

The Davis Test was used to measure level of reading comprehension.[5] The measure, a power test, has been validated against English grades in school.

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[4] These techniques measuring reading skills provide an inadequate picture of children's ability to extract normative meanings from messages. A study of children's meaning responses to communications is beyond the scope of this research.

[5] Frederick B. Davis and Charlotte Croon Davis, Davis Reading Test Manual (New York: The Psychological Corp., 1962). The Davis Test also measures reading speed. Series 2 was used with ninth graders and Series 1 with eleventh graders.

Reading scores were expressed in percentile form against each grade's norm before correlations were computed with print-use variables.

RESULTS

Table 2.4 shows product-moment correlations between reading comprehension and various measures of print media use. While several of the relationships are significant, their size is modest in terms of variance explained.

Table 2.4

CORRELATIONS BETWEEN READING COMPREHENSION AND PRINT-USE VARIABLES

Print-use variable	r
books read in last 30 days	.28*
weekday newspaper reading time	NS
recency-frequency of newspaper reading	.17*
Total mags	NS
reading in general interest adult mags	NS
reading in news mags	.15*
reading in sports and outdoors mags	NS
reading in motor and mechanical mags	NS
reading in teen mags	NS
reading in sex mags	-.17*
reading in misc. mags	.21*

*p< .01 N = 369

Book reading.

The correlation between comprehension and amount of book reading is surprisingly low. The regression is linear; the slope (books on skills) equals .014. The predicted mean number of books read is .74 for boys scoring at the 20th percentile on comprehension, 1.28 for boys at the 60th percentile and 1.55 for boys at the 80th percentile. The predicted mean never reaches two books, even for boys scoring at the 99th percentile in comprehension.

Thus many boys capable of comprehending and recalling only modest amounts of print material (under middle-class test conditions) nevertheless read books as a leisure pastime. Closer examination of titles mentioned reveals some apparent taste differences between low and high skill readers, however.

Taste is, of course, a vague concept. Its definition in behavioral terms rests on the ability to specify content categories in the mass media. This specification is difficult with books because of the great volume and heterogeneity of publishing output compared to the size of audience. Even with samples restricted on age and sex, such as the present one, the likelihood is small of finding more than a handful of persons who have recently read the same book.

Three categories of books, suggested by the study of newspaper content interests reported above, were used to test differences between skilled and unskilled readers. The first two categories are science fiction, a popular and easily identified reading interest, and novels based on sports, long thought to be attractive fare to adolescent boys.

The third category is more abstract. It represents books with themes that center on violence, aggressive behavior or the celebration of speed.

War stories, verified or exaggerated, are a prominent member of this category (e.g., The Dirty Dozen, Battle of the Bulge, Thirty Seconds Over Tokyo). Hot rodding adventures are another. Spy stories by Ian Fleming and others are less frequent mentions.

Table 2.5 shows the percentages of boys in the top reading quartile, middle half and bottom quartile who mentioned at least one book title in each content category. Analysis is confined to boys who reported at least some book reading (75 per cent in the top quartile, 58 per cent in the middle group and 45 per cent in the bottom).

Table 2.5

PERCENTAGES OF BOYS WHO READ EACH TYPE OF BOOK,
BY READING COMPREHENSION

Book category:	bottom quartile	middle half	top quartile
science fiction	13%	21%	24%
sports	3%	6%	8%
speed and violence	50%	26%	10%*
N =	38	118	62

* Chi-square = 19.5; p< .01

Although the percentage of science fiction reading increases with reading skill, the differences are not statistically significant. Much science fiction features complex character and plot relationships and uses abstract concepts in developing action. Nonetheless, the reading audience includes many boys with meager skills.

The amount of sports reading shown in Table 2.5 is surprisingly low for 14 to 16-year-old boys, especially in view of the number and variety of sports interests mentioned by this sample in response to questions about leisure use.

The only significant difference on book reading concerns speed and violence. The major reason for poor readers' consumption of books seems to be an interest in aggression.

Several possible explanations could account for this. These books may be among the simplest in vocabulary and structure; perhaps they are the only books some poor readers can decode sufficiently, even for fantasy experiences.

A more extended explanation refers to reinforcement differences between good and poor readers. The latter, partly because of frustrations resulting from deficient verbal abilities, may be generally more hostile and aggressive than good readers. Many hostile persons may use books to while away leisure time because they are private media, requiring none of the social contact often necessary for other pastimes, including television viewing in the characteristic family context. A fascination with violent themes in print would be reinforcing to these persons.[6]

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[6] Much of the research on effects of aggressive content in the

In any event, boys capable of transacting with their environment on the basis of print messages tend to avoid the more aggressive forms of fiction in print.

Newspaper reading.

Reading comprehension is associated with gross exposure to newspapers when indexed by a typology reflecting the recency of last reading combined with the frequency of reading. Comprehension does not correlate with children's average reading time once they get into the paper.

Thus the skillful reader turns to newspapers often, but spends an average amount of time at each sitting. He certainly consumes more print messages in this average time span than the poor reader, since comprehension and reading speed are highly correlated skills.[7]

The high comprehension reader also entertains more intense and diverse content interests in the newspaper. Factor scores derived in the first section of Study 2 were correlated with percentile scores for reading comprehension. Table 2.6 reports the results.

The skills variable correlates positively and significantly with interest in reading about public affairs and about science. Judging by the ratings of news leads in this study, public affairs

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mass media is reviewed in Albert Bandura, "Vicarious Processes: A Case of No-Trial Learning," in L. Berkowitz (ed.) *Advances in Experimental Social Psychology*, Vol. 2 (New York: Academic Press, 1965).

[7] Correlation between the two skills equals .93 for this sample of boys. In part this relationship may be an artifact. See the review of the Davis Test by Alton L. Raygor in *Mental Measurement Yearbook* (Highland Park: The Gryphon Press, 1965).

is rather unpopular content (most ratings were in the unlikely to read zone of the scale), and science is extremely popular (see section one).

Table 2.6

CORRELATIONS BETWEEN READING COMPREHENSION
AND FACTOR SCORES
FOR FIVE CONTENT INTEREST AREAS IN THE NEWSPAPER

Newspaper content areas:	r
public affairs	.16*
science	.26*
speed and violence	NS
teen news	NS
sports	NS

* $p < .01$

N = 373

Interest in other content areas of the newspaper--speed and violence, teen news and sports--does not correlate with comprehension. At first it appears that the lack of correlation with speed and violence departs from the finding for books, where it was found that low skill boys read works featuring aggressive themes more than high skill boys.

The inconsistency in findings may result from differences between newspaper violence and book-length fiction violence in opportunities for vicarious experience and identification with characters portrayed.[8] A highway crash is a pallid substitute for the Normandy invasion. If low-comprehension boys turn to aggressive books in part because of frustration arising from poor verbal abilities, they are unlikely to find satisfaction for their aggressive needs in newspaper accounts of bank robberies, auto accidents and drag racing equal to the rewards of war episodes and spy stories.

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[8] Part of the inconsistency is more apparent than real. Table 2.5 compares book readers. If the base is changed to include non-readers, 7 per cent of the top quartile, 15 per cent of the middle group and 22 per cent of the bottom quartile boys read books featuring speed and violence.

Magazine reading.

Correlations between comprehension and magazine use were calculated in a variety of ways. First is the correlation with total exposure to magazines, which is the number of titles each boy mentioned weighted by the average amount of reading he reported in each. Comprehension is not significantly related to this gross measure of magazine reading, as Table 2.4 shows.

Next, correlations are shown between reading skills and exposure to magazines after they are classified by assumed content similarities. The magazine categories are:[9]

1. General interest adult mags--Life, Look, Saturday Evening Post, Readers Digest and other publications edited for a relatively undifferentiated audience.

2. News mags--Time, Newsweek, U.S. News and World Report.

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[9] Classifying magazine titles into a priori content types presents obvious problems of assignment. There is some evidence that the system used here involved little overlap between categories. The only positive correlation among these teenage boys is between reading general content adult magazines and news magazines ($r = .32$; $p < .01$). Interestingly, there is a negative correlation between sports-outdoor and motor-mechanical reading ($r = -.13$; $p < .05$).

Inspection of correlations between reading in the more popular magazines suggests two deficiencies in the coding scheme:

3. Sports and outdoors mags--*True*, *Sports Illustrated*, *Outdoor Life*, *Hunting and Fishing*, *Golf* and other publications oriented toward the fan of spectator or participant sports.

4. Motor and mechanical mags--*Cycle World*, *Sports Car Graphic* *Electronics Illustrated*, *Popular Mechanics*, *Hot Rod* and others.

5. Sex mags--*Playboy*, *Stag*, *Cavalier* and other highly illustrated fare.

6. Teen mags--*Teen Set*, *Sixteen*, *Hit Parader*, etc.

7. Miscellaneous--any title that did not fit into the above scheme.

The need to make some distinction between areas of magazine reading is apparent. Skills do not correlate with exposure to adult general interest publications, which often contain high proportions of photographs and other non-verbal material, nor with reading sports-outdoors, motor-mechanical or teen magazines.[10]

Reading in news magazines does correlate with skills. This is not surprising in light of the association between comprehension and interest in both public affairs and science information in the newspaper; this content is a major ingredient of *Time* and her sister publications. (Also, see results in Study 1, section one.)

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(1) *Sports Illustrated* does not attract the same boys who read other sports and outdoor publications, and (2) magazines coded into motor and mechanical appeal to a heterogeneous audience of boys.

[10] Correlations did emerge between comprehension and reading individual magazines in these categories, however. The correlation with *Readers Digest* is .13, *Popular Science* .12, and *Hot Rod* -.18. These coefficients are significant at or beyond the .05 level.

The negative correlation with reading sex magazines suggests that it is not the occasional fiction by Norman Mailer or Saul Bellow the lures most teenage boys to Playboy, but rather the gatefold photographs. It is possible that more extensive research would add libidinous fantasy to aggressive needs as dominant themes in print use by poor readers.

Most of the magazines coded in the miscellaneous category are sources of information about special interests like hobbies. Coin collection, photography, model building and farming are typical. In addition, two magazines are repeatedly included in this category, The National Geographic and Boys Life.

The National Geographic is responsible for most of the relationship with comprehension; it alone correlates at .23 ($p < .01$).

DISCUSSION

Considering the data reported here, what use can teachers make of skills test results in planning reading activities at school? If this question is prompted by a desire to expose boys to print materials they consider rewarding, reading comprehension is an uncertain criterion.

Good readers (in the normative sense of that label) are more likely than poor readers to be familiar with books, with newspapers, with public affairs topics and with scientific developments. Good readers are less likely to seek violence in books or to be absorbed with the most available forms of print sex. But in all cases the correlations between skills and print use are too modest for predictive use in the classroom.

Thus, reading comprehension is an inadequate means of grouping students or of guiding their exposure to reading materials. If verbal facility is developed by increased exposure to print messages, classroom materials might be programmed so that they promise high reward to the audience, but increase gradually in verbal sophistication. Teachers may have to start poor readers on a diet of aggressive (and even sexual?) materials to convince them that print can be rewarding. As the reader becomes engrossed, perhaps he can be shifted to works with moderate aggressive outlet that are characterized by greater vocabulary and more complex plots. The careful use of violent science fiction is a possibility.

If newspapers are used in the classroom, speed and violence copy, teen news and sports should not be ignored. This content appeals to a number of boys with modest skills. It is, of course, among the most stereotypic material in the average newspaper and is not likely to be a vocabulary or concept builder. However, efforts to graduate sports fans to novels with sports themes and non-fiction works might be successful. More demanding magazines and books can also be found for the follower of speed and violence or teen news.

The educational game being outlined here is one of luring a youngster into voluntary exposure to print materials lacking total redundancy with his vocabulary and conceptual inventory. It is assumed that voluntary exposure is a necessary, but not sufficient condition for verbal growth. Teachers can organize this game more rationally if they have data available concerning the print use and interests of their students, in addition to knowledge of their reading abilities. The questionnaire used in this study could easily be adapted to this use.

The theoretical rationale behind measures of normative reading skills suggests a second approach teachers might adopt if they want to increase children's use of print media. This is to create classroom situations offering opportunities for transaction as a consequence of reading specified materials. For example, if knowledgeable reading of science becomes a gateway to social interaction with peers, we can expect some youngsters to increase voluntary exposure to this content.

Transaction may have other benefits. If boys are invited to discuss the violent and aggressive themes they encounter in books, the reading experience becomes an opportunity to discover other interpretations of this kind of verbal output. It is possible that by comparing reactions to aggressive books and newspaper stories some boys may discover the stereotypy of much of this content and begin seeking less redundant fare.

Reading teams organized around overlapping content interests are one vehicle for increasing transaction. Exercises in goal seeking can also be devised that center around children's leisure interests. With some guidance boys keen on hopping up cars might become avid readers of technical periodicals and works on automotive engineering that contain higher ratios of verbal content than most of the magazines available on drugstore racks.[11]

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[11] For a variety of imaginative classroom uses of mass culture, see Stuart Hall and Paddy Whannel, The Popular Arts (New York: Pantheon,

With most of these educational efforts toward greater print use, teachers have to sacrifice biases about what youngsters ought to be interested in. Data reported here show that low-skill boys are especially interested in some forms of socially disapproved print. Findings also indicate that deficient skills apparently are only a minor barrier against reading "quality" magazines and newspaper articles. Communication researchers might begin testing classroom methods designed to diversify reading behavior among children with modest verbal abilities.

1965). A reading program for verbally deficient children is suggested by Daniel N. Fader, Hooked on Books (New York: Berkeley Publishing Corp., 1966).

SUMMARY

This report presents data from two studies of the amount and kind of reading by adolescent boys. In Study 1, 137 tenth-grade boys and their parents were interviewed to determine whether sons' reading behavior correlates with mothers' or fathers' use of the print media, and whether social contact in the family about reading is related to the amount of reading by son, or to parent-child similarities in reading.

Principal findings are:

(1) Sons' use of books does not correlate with parents' book reading.

(2) Few indices of social contact about books--taking son to library, giving books as presents, recommending books or asking son's opinion about books he has read--correlate with amount of reading by boys. Where correlations emerge, they are between mothers and sons, not fathers.

(3) Parents and sons have similar reading patterns in several categories of magazines--general interest, news and mechanical publications. Mothers appear the most important socializers of reading in general interest magazines (*Life*, *Readers Digest*, etc.). Fathers are most important for mechanical works (*Mechanics Illustrated*, *Popular Mechanics*, etc.).

(4) The extent to which boys identify with their fathers--that is, aspire to be like father--is associated with similarities between father and son in several aspects of print use, including book reading, news magazine reading and reading mechanical publications.

(5) The extent of sons' reading in news magazines is related to the amount of independence training exerted by mothers, but not by fathers.

(6) The magnitude of correlation between fathers' and sons' content interests in the print media (as distinguished from reading of specific print vehicles) varies depending on subject matter. Significant relationships were found for public affairs, sports, car and hot rod news and topics of teen interest, but not for science news or reports of violence.

In Study 2, 381 ninth and eleventh-grade boys completed questionnaires at school indicating various aspects of reading behavior and were administered the Davis Reading Test measuring speed and comprehension. The purpose was to study relationships among boys' content interests in the print media, reading skills and reading behavior.

Factor analysis of content interests (with oblique rotation) disclosed a high relationship between interest in public affairs and science, and lower associations involving other topic categories. Interest in science is high among boys, and interest in public affairs is low. Interest in both areas correlates, however, with use of newspapers, book reading and reading in general interest and news magazines.

Level of reading comprehension (and speed) correlates with amount of book reading, recency-frequency of newspaper reading and reading in news magazines. Skills also correlate with interest in public affairs and science topics.

Among boys who read books, the popularity of violent and aggressive titles is negatively associated with reading comprehension; poor readers report reading more war and adventure stories than good readers.

Implications of these results are drawn for the use of reading test scores as stratification variables in language arts curricula in the schools.